REMARKS

I. INTRODUCTION

Claims 1-6, 9 and 12-18 are pending in the present application. Applicant would like to thank the Examiner for indicating that claim 15 contains allowable subject matter. However, in view of the following remarks, it is respectfully submitted that all of the pending claims are allowable.

II. THE 35 U.S.C. § 103(a) REJECTION SHOULD BE WITHDRAWN

Claims 1-6, 9, 12-14, and 16-18 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Piet et al. (European Published App. No. EP 1,349,098) in view of Wood et al. (U.S. Published App. No. 2003/0095697).

Claim 1 recites "[a] method of processing user interaction in a medical environment with a medical image for producing measurement data related to graphics on the medical image, the method comprising: attaching a dynamic measurement object to a first graphic object displayed on a monitor, the dynamic measurement object including measurement data related to the first graphic object; detaching, via a user interface device, the dynamic measurement object from the first graphic object; and attaching, via the user interface device, the dynamic measurement object to a second graphic object displayed on the monitor, wherein the measurement data is modified to be related to the second graphic object."

Piet discloses three windows: a template window, an image window, and a measurement window. (*See* Piet, Fig. 2). Points from template window "are placed manually in the image by cursor clicks." (*Id.* at ¶ [0097], Figs. 1-4). The template window merely serves to impose "the placement order by highlighting each point in sequence (e.g. by blinking the point in the template)." (*Id.*). Piet also discloses an automated placement that carries out this function. (*Id.* at ¶¶ [0107]-[0109]). In either case, "[m]easurment values may be displayed either discretely or continuously in the

measurement values window as the user moves the position of a point over the image." (*Id.* at ¶ [0116], Figs. 1-4).

In contrast, claim 1 recites "*attaching a dynamic measurement object to a first graphic object… the dynamic measurement object including measurement data related to the first graphic object.*" The same dynamic measurement object is later detached from the first graphics object and attached to "*a second graphic object…wherein the measurement data is modified to be related to the second graphic object.*" For example, if the dynamic measurement object is attached to a line, it will display the measurement data relating to that line (e.g. length = 3 in.). If that same dynamic measurement object is detached from the line and attached to a different line, the dynamic measurement object will display the measurement data relating to the second line (e.g. length = 5 in.). There is no detachment of any points in Piet and placement of those points at a second position. The Examiner realizes this deficiency and correctly acknowledges that Piet fails to disclose or suggest "*attaching, via the user interface device, the dynamic measurement object to a second graphic object displayed on the monitor, wherein the measurement data is modified to be related to the second graphic object.*" (*See* 8/18/11 Office Action, p. 5).

The Examiner also refers to paragraphs [0033]-[0035] of the Piet reference. (*See* 8/18/11 Office Action, p. 3). This portion of Piet explains a measurement scheme, in which a stencil overlay of points to be moved by the user is placed on the displayed x-ray image or, alternatively, measurement points to be mapped to their actual positions are placed immediately in the image itself. (*See* Piet, ¶ [0033], [0034]). In a 3D embodiment, Piet discloses that a measurement point can be located in two projections of the same anatomy to guide "the user in the mapping of the projection point of a certain 3D point in the associated projection images." (*Id.* at ¶ [0035]). Applicants respectfully submit that this disclosure is irrelevant with respect to the above-identified deficiencies of Piet. Throughout the Piet disclosure, a graphical part (a point, a line, etc.) is mapped by a user to an anatomical image. However, Piet never discloses, nor does the Examiner explain in the Office Action, how this disclosure relates to the recited "detaching, via a user

interface device, the dynamic measurement object from the first graphic object; and attaching, via the user interface device, the dynamic measurement object to a second graphic object displayed on the monitor, wherein the measurement data is modified to be related to the second graphic object." Thus, Piet fails to disclose or suggest the recitation of claim 1.

To cure the deficiencies of Piet, the Examiner refers to Wood. Wood discloses a computer-aided diagnostic method to assess the probability, likelihood or predictive value of detected or identified suspected abnormalities. (*See* Wood, Abstract). The Examiner refers to Fig. 5 of Wood, which shows "a first display 510 of CT sections, a second display 520 that is a volumetric view of the volume encompassed by the CT sections, and a third display 530 that is a magnified and rotatable portion of part of the volume rendered in the second display." (*Id.* at ¶ [0053]).

One of the functionalities disclosed by Wood with regards to the display 500 in Fig. 5 is a measurement button 554, on which the Examiner relies to cure the above-identified deficiencies of Piet. (*See* 8/18/11 Office Action, p. 5). Wood describes the functionality of this button (554) in paragraphs [0071] - [0073]. The Examiner specifically relies on Wood's disclosure that "when the mouse is clicked and held, the cursor can be dragged within the display and a measurement calculated representing the distance covered by the cursor within the display." (*See* Wood, ¶ [0071]). Applicant respectfully submits that this is a common functionality. Wood's disclosure is merely a click and drag functionality in which, for example, a line is drawn by holding a mouse button at a certain point, dragging the cursor to a target point, and releasing the mouse button. This results in a line, which has a specific measurement value. In order to create a new measurement value, a user of the Wood method would have to perform these steps to create another line with a different measurement. Applicant respectfully submits that this functionality suffers from the same deficiency as Piet.

The Examiner further relies on Wood's disclosure of automated measurement. Specifically, Wood discloses that "in the third display 530, measurement data such as

nodule diameter, volume, average intensity level and maximum intensity level can be displayed as data 950 (FIG. 9B) for a selected or highlighted nodule." (*See* Wood, ¶ [0071]). However, this functionality also differs from that of claim 1. Wood's automated measurement merely calculates certain characteristics for any node the user selects. However, there is no measurement object that is detached from a first node and attached to a second node resulting in the modification of the measurement data to be related to the second node. This functionality is recited in claim 1 as "detaching, via a user interface device, the dynamic measurement object from the first graphic object; and attaching, via the user interface device, the dynamic measurement object to a second graphic object displayed on the monitor, wherein the measurement data is modified to be related to the second graphic object." Therefore, it is respectfully submitted that Wood fails to cure the above-identified deficiencies of Piet.

To cure the deficiencies of Wood, the Examiner also points to Wood's disclosure regarding Figure 5 of a horizontal line in the second display (520) that indicates where a CT section of the first display (510) is located in the 3D volume displayed in the second display. (*See* 8/18/11 Office Action, p. 3) (referring to Wood, ¶ [0071], Fig. 5). The Examiner points to the fact that the first, second, and third displays are related and that movement of the horizontal line has a direct impact on the other displays. (*See* Id.). Applicants do not dispute this relationship exists. However, establishing the relationship between different views does not meet the recitation in claim 1 of "*attaching, via the user interface device, the dynamic measurement object to a second graphic object displayed on the monitor, wherein the measurement data is modified to be related to the second graphic object.*"

Applicants respectfully submit that neither Piet nor Wood, alone or together, disclose or suggest "attaching a dynamic measurement object to a first graphic...the dynamic measurement object including measurement data related to the first graphic object" and "detaching…the dynamic measurement object from the first graphic object; and attaching…the dynamic measurement object to a second graphic object…*wherein the measurement data is modified to be related to the second graphic object*," as recited in

claim 1. Thus, the withdrawal of the 35 U.S.C. § 103(a) rejection of claims 1 and its dependent claims 2-6, 9 and 16-18 is respectfully requested.

Claims 12 and 13 recite the method of claim 1. Thus, Applicant respectfully requests the withdrawal of the rejection of these claims for at least the same reasons as claim 1. Claim 14 recites "a second code segment (112) for removably attaching at least one dynamic measurement object based on said measurement data to said graphic object." Since Piet and Wood neither teach nor suggest a removably attached dynamic measurement object, the withdrawal of the rejection of claim 14 is also respectfully requested.

CONCLUSION

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

Dated: October 18, 2011

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